

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method of providing information about a real-world space, comprising ~~the steps of~~ :

(a) — as each of multiple users moves through said space, depositing and storing virtual markers ~~are deposited and stored~~ to indicate associated locations visited by the user in the space;

(b) — aggregating the virtual markers deposited in respect of said multiple users ~~are aggregated~~, in dependence on their associated locations, either when ~~being stored~~ storing the markers or subsequently; and

(c) — using data about the aggregated markers of multiple locations ~~is used to provide an information item relevant to use of the space to a further user moving through the space.~~

2. (currently amended) A method according to claim 1, comprising:
providing wherein a plurality of storage location cells are ~~provided~~ that correspond to respective areas of said space; and

associating strength values with the virtual markers ~~having associated strength values; wherein~~ and

storing and aggregating each marker being stored and aggregated by having comprises:

adding a its strength value associated with the marker ~~added~~ to an existing aggregated strength value, if any, stored in the location cell that corresponds to ~~the~~ an area covering the location associated with the marker; and

storing the resulting value as an aggregated strength value in the location cell that corresponds to the area covering the location associated with the marker.

3. (original) A method according to claim 2, wherein the storage and aggregation of a said marker involves, in addition to increasing the aggregated strength value of the corresponding location cell by the strength value of the marker, increasing by a lesser amount the aggregated strength value of at least one location cell covering a said area adjacent to the area covering the location associated with the marker.

4. (currently amended) A method according to claim 1, wherein the individual markers that have been deposited are retained after aggregating the markers~~aggregation in step (b)~~, the markers deposited in respect of at least one user including information associating together those markers whereby to enable the trail taken by the user through the space to be determined.

5. (original) A method according to claim 1, wherein said virtual markers are deposited automatically at one of:

- predetermined intervals of time;
- predetermined intervals of distance; or
- predetermined locations in said space.

6. (original) A method according to claim 1, wherein the said virtual markers deposited in respect of each user are deposited by a mobile device carried by the user.

7. (original) A method according to claim 6, wherein the virtual markers are stored in a central system.

8. (original) A method according to claim 1, wherein the said virtual markers are deposited and stored by an infrastructure system that monitors the locations of the users.

9. (currently amended) A method according to claim 1, wherein using data about the aggregated markers of multiple locations to provide an information item relevant to use of the space to a further user moving through the space~~step (c)~~ comprises presenting,

as said information item, an image of a virtual landscape formed by the location-dependent aggregations of markers mapped to a representation of the space.

10. (currently amended) A method according to claim 1 wherein, in using data about the aggregated markers of multiple locations to provide an information item relevant to use of the space to a further user moving through the space, ~~step (e)~~ said information item comprises information about a path through the space, this information being derived by using the marker aggregation data to determine a path that follows ridges in a virtual landscape formed by the location-dependent aggregations of markers.

11. (currently amended) A method according to claim 1 wherein in using data about the aggregated markers of multiple locations to provide an information item relevant to use of the space to a further user moving through the space, ~~step (e)~~ said information item comprises information about a path through the space, this information being derived by using the marker aggregation data to determine a path that follows throughs in a virtual landscape formed by the location-dependent aggregations of markers.

12. (currently amended) A method according to claim 1 wherein in using data about the aggregated markers of multiple locations to provide an information item relevant to use of the space to a further user moving through the space, ~~step (e)~~ said information item comprises information about a path through the space, this information being derived by using the marker aggregation data to determine a path that avoids ridges in a virtual landscape formed by the location-dependent aggregations of markers.

13. (currently amended) A method according to claim 1 wherein in using data about the aggregated markers of multiple locations to provide an information item relevant to use of the space to a further user moving through the space, ~~step (e)~~ said information item comprises information about a path through the space, this information being derived by using the marker aggregation data to determine a path that avoids throughs in a virtual landscape formed by the location-dependent aggregations of markers.

14. (currently amended) A method according to claim 1, wherein using data about the aggregated markers of multiple locations to provide an information item relevant to use of the space to a further user moving through the space~~step (e)~~ involves using the aggregated marker data to predict a next location for a further user moving through the space having regard to that user's current location, this predicted next location then being used to provide to a mobile device of the further user, as said information item, either the ~~identify~~identity of media items associated with that predicted next location or the items themselves.

15. (currently amended) A method according to claim 1, wherein in depositing and storing virtual markers~~step (a)~~ comprises depositing a said virtual marker is deposited when a said user reaches a location corresponding to a feature of interest in the space, using data about the aggregated markers of multiple locations to provide an information item relevant to use of the space to a further user moving through the space~~step (e)~~ involving using the aggregated marker data concerning such features to provide, as said information item, information about their relative popularity.

16. (currently amended) A method according to claim 1, wherein ~~in step (a)~~depositing and storing visual markers comprises depositing a said virtual marker ~~is deposited~~ upon a said user requesting, whilst at a location corresponding to a feature of interest in the space, to be presented with a media item concerning that feature; using data about the aggregated markers of multiple locations to provide an information item relevant to use of the space to a further user moving through the space ~~step (e)~~ involving using the aggregated marker data concerning such features to provide, as said information item, information about their relative popularity.

17. (cancelled) ~~A method according to claim 1, wherein step (e) is effected for a further user moving through the space with said information being provided to that user.~~

18. (currently amended) Apparatus for providing information about a real-world space, the apparatus comprising:

-a first arrangement arranged to deposit and store virtual markers to indicate associated locations visited by each of multiple users in the space;

-a second arrangement arranged to aggregate the virtual markers deposited in respect of said multiple users, in dependence on their associated locations, either when the markers are being stored or subsequently; and

-a third arrangement comprising a mobile device for enabling a further user in said space to request and be presented with an information item relevant to use of the space, and a data-processing system arranged to use data about the aggregated markers of multiple locations to provide said information item in response to said request ~~relevant to use of the space.~~

19. (currently amended) Apparatus according to claim 18, wherein the first arrangement comprises a plurality of storage location cells that correspond to respective areas of said space, the first arrangement being arranged to ~~associated~~associate strength values with the virtual markers, and the first and second arrangements together being arranged to store and aggregate each deposited marker by having its strength value added to an existing aggregated strength value, if any, stored in the location cell that corresponds to the area covering the location associated with the marker.

20. (original) Apparatus according to claim 19, wherein the first and second arrangements are together arranged, when storing and aggregating a said marker, not only to increase the aggregated strength value of the corresponding location cell by the strength value of the marker, but also to increase by a lesser amount the aggregated strength value of at least one location cell covering a said area adjacent to the area covering the location associated with the marker.

21. (original) Apparatus according to claim 18, wherein the first arrangement is arranged to retain the individual markers after marker aggregation by the second arrangement, the first arrangement being further arranged to associate with markers deposited in respect of at least one user information associating together those markers whereby to enable the trail taken by the user through the space to be determined.

22. (original) Apparatus according to claim 18, wherein the first arrangement comprises mobile devices intended to be carried by said multiple users, each mobile device being arranged to deposit said virtual markers in respect of a said user carrying the device.

23. (original) Apparatus according to claim 22, wherein the first arrangement further comprises a central system for storing the virtual markers deposited by the mobile devices.

24. (currently amended) Apparatus according to claim 18, wherein the first arrangement comprises an infrastructure system arranged to ~~monitors~~ monitor the locations of the users and to deposit and store said virtual markers.

25. (currently amended) Apparatus according to claim 18, wherein the data-processing system of the third arrangement is arranged to ~~provide~~ present, as said information item, an image of a virtual landscape formed by the location-dependent aggregations of markers mapped to a representation of the space.

26. (currently amended) Apparatus according to claim 18, wherein the data-processing system of the third arrangement is arranged to derive, as said information item, information about a path through the space by using the marker aggregation data to determine a path that follows ridges in a virtual landscape formed by the location-dependent aggregations of markers.

27. (currently amended) Apparatus according to claim 18, wherein the data-processing system of the third arrangement is arranged to derive, as said information item, information about a path through the space by using the marker aggregation data to determine a path that follows troughs in a virtual landscape formed by the location-dependent aggregations of markers.

28. (currently amended) Apparatus according to claim 18, wherein the data-processing system of the third arrangement is arranged to derive, as said information item, information about a path through the space by using the marker aggregation data to determine a path that avoids ridges in a virtual landscape formed by the location-dependent aggregations of markers.

29. (currently amended) Apparatus according to claim 18, wherein the data-processing system of the third arrangement is arranged to derive, as said information item, information about a path through the space by using the marker aggregation data to determine a path that avoids troughs in a virtual landscape formed by the location-dependent aggregations of markers.

30. (currently amended) Apparatus according to claim 18, wherein the data-processing system of the third arrangement is arranged to use the aggregated marker data to predict a next location for ~~said a~~ further user ~~moving through the space~~ having regard to that user's current location, the data-processing system third arrangement being further arranged to use the predicted next location to provide to ~~the~~ a mobile device of the further user, as said information item, either the identify identity of media items associated with that predicted next location or the items themselves.

31. (currently amended) Apparatus according to claim 18, wherein the first arrangement is arranged to deposit a said virtual marker whenever a said user reaches a location corresponding to a feature of interest in the space, the data-processing system of the third arrangement being arranged to use the aggregated-marker data concerning such features to provide, as said information item, information about their relative popularity.

32. (original) Apparatus according to claim 18, wherein the first arrangement is arranged to deposit a said virtual marker upon determining that a said user is at a location corresponding to a feature of interest in the space and has requested to be presented with a media item concerning that feature, the data-processing system of the third arrangement

being arranged to use aggregated-marker data concerning such features to provide as said information item, information about their relative popularity.

33. (canceled)